

REMARKS

Claim 14 has been amended. No new matter has been introduced. Support for the amended claims and the new claim is found throughout the specification, claims, and drawings as originally filed. Thirty-eight (38) claims are pending and remain for consideration. Favorable reconsideration of the pending claims and further examination of the application is respectfully requested.

IN THE CLAIMS

35 U.S.C. § 102

Claims 1-3, 5-7, 9, 12-13 and 16-17 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,033,000, to Littlejohn et al. This rejection is respectfully traversed.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Verdegaal Bros. v Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the Applicants' claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

Claim 1 recites at least one input and at least one output. The input is adapted to be *programmably mapped* to the output according to a user's preferences.

Littlejohn fails to disclose an input is adapted to be *programmably mapped* to an output, as set forth in claim 1. Instead, Littlejohn discloses control signals from an input that are modified by an algorithm in accordance with the prescription of a particular user (see col. 1, lines 63-65). The modifications performed are the filtering of input signals and the control of acceleration and deceleration (see col. 2, lines 10-12). The filtering cancels out affects such as shaking and jerky movements of the user (see col. 1, lines 29-37). The control of acceleration and deceleration are controlled in

accordance with the abilities of the user (see col. 1, lines 13-28). The user is identified by entry of a key code (see col. 1, lines 59-63). For specific types of input, there are variations among users (see col. 1, lines 14-15). Accordingly, input data is modified as appropriate for the type of input device (see col. 3, lines 5-6). Depending upon the type of input device used, the input signal is modified to provide the appropriate drive signals to motors (see col. 1, lines 24-28). Input signals are modified so that the user can go exactly straight and can stay in one position despite modest movements in the input device (see col. 4, lines 49-52). In addition, the algorithm provides increased response sensitivity at slower speeds and decreased sensitivity at higher speeds to get the user more maneuverability at lower speeds and prevent sharp turns at higher speeds (col. 4, lines 52-56). There is no disclosure of an input that is adapted to be *programmably mapped* to an output, as set forth in claim 1. In the absence of such disclosure, claim 1 is allowable over Littlejohn. Favorable reconsideration of claim 1 in this regard is respectfully requested.

Claims 2-3, 5-7, 9 and 12-13 depend from claim 1 and are allowable over Littlejohn for at least the same reasons as claim 1, as set forth above. In addition, claim 6 recites a plurality of switched inputs and a plurality of outputs, wherein *different switched inputs are adapted to be programmably assigned to control different outputs*. Littlejohn fails to disclose the invention set forth in claim 6. In the absence of such disclosure, claim 6 should be allowable in its own right. Claim 7 depends from claim 6 and is allowable over Littlejohn for at least the same reasons as claim 6, as set forth above. Claim 9 recites at least one input is *a switched input for controlling a personal mobility vehicle light*. The switched input is adapted to be *programmably mapped to control the output instead of the light*. Littlejohn fails to disclose the invention set forth in claim 9. In the absence of such disclosure, claim 9 should be allowable in its own right.

Claim 16 recites an input that is adapted to be *programmably mapped* to the output according to a user's preferences, similar to claim 1, and is allowable over

Littlejohn for the same reasons as claim 1, as set forth above. In addition, the output is a commonly used output and the input is programmably mapped to the output so that the commonly used output can be performed while *minimizing the number of sequences* of input commands required to perform the output. Littlejohn fails to disclose the invention set forth in claim 16. Hence, claim 16 is allowable over Littlejohn as written.

Claim 17 depends from claim 16 and is allowable over Littlejohn for at least the same reasons as claim 16, as set forth above.

Claims 14-15 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,819,981, to Wakefield, II et al. This rejection is respectfully traversed.

Claim 14 has been amended to recite at least one user interface object, a plurality of targets, and a processor that is programmable to send an action message from the user interface object to *any one of the targets*. This permits the action message to be associated with a desired input, and the target to which the action message is to be sent to be customized for the user.

Wakefield fails to disclose a processor that is programmable to send an action message from the user interface object to *any one of the targets*, as set forth in claim 14. Instead, Wakefield discloses an apparatus for setting speed/response performance parameters to operational characteristics of an individual user. There is no disclosure of a processor that is programmable to send an action message from the user interface object to *any one of* a plurality of targets, as set forth in claim 14. In the absence of such disclosure, claim 14 is allowable over Wakefield. Favorable reconsideration of claim 14 in this regard is respectfully requested.

Claim 15 depends from claim 14 and is allowable over Wakefield for at least the same reasons as claim 14, as set forth above.

Claims 21-22, 24, 30-32, 34-35 and 38 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,807,465, to Ulrich et al. This rejection is respectfully traversed.

Claim 21 recites a method for *mapping personal mobility vehicle inputs to outputs*. The method comprises the step of providing a personal mobility vehicle having inputs, outputs and a programmable processor for performing operations or control functions of the outputs in response to signals from the inputs. A desired input is selected. An operation or control function is assigned to the desired input. An output is associated with the assigned operation or control function.

Ulrich fails to disclose a method as set forth in claim 21. Instead, Ulrich discloses a control system programmed with at least one control map defining a desired dynamic and programmed with a desired mass-indicative parameter and desired drag parameter (see col. 1, lines 3-6). The control map may be either constant to the control system or selectable by the user through an interface with a CPU (see col. 4, lines 21-23). The control system disclosed utilizes the control map and measured values of driving torque from the user and an actual velocity to determine a desired velocity and control a motor to reduce an error component between the actual velocity and the desired velocity (see claim 1, col. 8, lines 12-17 and see claim 5, col. 8, lines 37-42). A torque transducer transmits a value to the CPU, which utilizes a desired dynamic or control map to transform the measured torque value into a desired drive wheel velocity (see col. 4, lines 32-35). There is no disclosure of a method for *mapping inputs to outputs*, as set forth in claim 21. In the absence of such disclosure, claim 21 is allowable over Ulrich. Favorable reconsideration of claim 21 in this regard is respectfully requested.

Claims 22, 24, 30-32 and 34-35 depend from claim 21 and are allowable over Ulrich for at least the same reasons as claim 21, as set forth above. In addition, claims 24, 30, 32 and 34-35 recite additional method steps that Ulrich fails to disclose. In the absence of some disclosure of these additional method steps, claims 24, 30, 32 and 34-35 should be allowable in their own right.

Claim 38 recites an electronic control system for a wheelchair. The control system comprises a plurality of input devices, a plurality of output devices, and a

control system for controlling the output devices in response to signals from the input devices. The control system is programmable to *map the input devices to desired output devices* according to a user's preferences. Ulrich fails to disclose a control system as set forth in claim 38. In the absence of such disclosure, claim 38 is allowable over Ulrich. Favorable reconsideration of claim 38 in this regard is respectfully requested.

35 U.S.C. § 103

Claims 4, 8, 10-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Littlejohn in view of U.S. Patent No. 5,345,226, to Rice, Jr. et al. This rejection is respectfully traversed.

To establish a prima facie case of obviousness, the claimed invention must be considered as a whole and the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182 187 n.5 (Fed. Cir. 1986). Moreover, the references, when combined, must teach or suggest all the claim limitations and the teaching or suggestion to make the claimed combination must be found in the references, and not in Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). A statement that modifications of the references to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).

Claims 4, 8 and 10-11 depend from claim 1 and are allowable over Littlejohn for at least the same reasons as claim 1, as set forth above. Rice fails to cure the

deficiencies in Littlejohn. Hence, the claims remain allowable over Littlejohn and Rice.

Claims 25, 27 and 36-37 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ulrich in view of Littlejohn. This rejection is respectfully traversed.

Claims 25, 27 and 36-37 depend from claim 21 and are allowable over Ulrich for at least the same reasons as claim 21, as set forth above. Littlejohn fails to cure the deficiencies in Ulrich. Hence, these claims remain allowable over Ulrich and Littlejohn.

Claims 18-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Littlejohn in view of Wakefield. This rejection is respectfully traversed.

Claims 18-20 depend from claim 16 and are allowable over Littlejohn for at least the same reasons as claim 16, as set forth above. Wakefield fails to cure the deficiencies in Littlejohn. Hence, the claims remain allowable over Littlejohn and Wakefield.

Claims 23, 26, 28-29 and 33 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ulrich in view of Wakefield. This rejection is respectfully traversed.

Claims 23, 26, 28-29 and 33 depend from claim 21 and are allowable over Ulrich for at least the same reasons as claim 21, as set forth above. Wakefield fails to cure the deficiencies in Ulrich. Hence, these claims remain allowable over Ulrich and Wakefield.

Request for Telephone Interview

As a final matter, if the Examiner has any suggestions concerning different claim phraseology that, in the opinion of the Examiner, more accurately defines the present invention, prior to issuance of another Office Action, Applicants' undersigned attorney requests the courtesy of a telephone interview at the Examiner's earliest convenience to discuss the application. Applicants' undersigned attorney may be contacted at (419) 255-5900.

In view of the amendments and above remarks, it is believed that the application is in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested.